

07/31/03
U.S. PAT.
07/31/03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Kyung-geun Lee, et al.

Serial No. Unassigned

Group Art Unit: Unassigned

Confirmation No.

Filed: July 31, 2003

Examiner:

For: OPTICAL INFORMATION STORAGE MEDIUM AND METHOD OF RECORDING
INFORMATION THEREON

PETITION TO MAKE SPECIAL: SPECIAL EXAMINING PROCEDURE

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

The Applicants respectfully request that the above-identified application be advanced out of turn for examination in accordance with 37 C.F.R. §1.102(d) and MPEP §708.02VIII - Special Examining Procedure for Certain New Applications-Accelerated Examination. In accordance with MPEP §708.02VIII, each of the requirements therein have been met by the Applicants.

These requirements have been complied with as follows:

- (A) the \$130 fee set forth in 37 CFR 1.17(h) is enclosed herewith;
- (B) all claims (claims 1-15) are submitted as being directed to a single invention;
- (C) a pre-examination search was made, evidence of which is enclosed in Attachment A listing the field of search by class and subclass, publication, Chemical Abstracts, foreign patents, etc.;
- (D) one copy each of the references deemed most closely related to the subject matter encompassed by the claims if said references are not already of record; and
- (E) a detailed discussion of the references is enclosed in Attachment A, which discussion points out, with the particularity required by 37 CFR 1.111 (b) and (c), how the claimed subject matter is patentable over the references.

Based on the foregoing and the enclosed Attachment A, the Petition to make the above-

identified application special and to be advanced out of turn for examination is respectfully requested.

Should any questions arise from this Petition, the Examiner in charge of the above-identified application is requested to contact the Applicants' attorney listed below.

If any further fees are required in connection with the filing of this Petition, please charge the same to our deposit account number 19-3935. Respectfully submitted,

STAAS & HALSEY LLP

Date: 7/31/03

By:



Michael D. Stein
Registration No. 37,240

1201 New York Ave, N.W., Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501

ATTACHMENT A

I. CLASSES AND SUBCLASSES SEARCHED

Applicants have caused a pre-examination search in June of 2003 to be made which included the following classes and subclasses:

Class 369 Dynamic Information Storage or Retrieval
Subclass 30.22 correction of error
Subclass 47.14 medium defect indicative control signal
Subclass 53.15 defect
Subclass 53.17 defect location indicating
Subclass 53.2 of record carrier
Subclass 53.24 having unrecorded location indication

A computer keyword searching was also conducted using the PTO EAST search system.

II. PUBLICATIONS UNCOVERED:

From the pre-examination search, the following publications were uncovered. The below publications are again listed on the enclosed PTO-Form 1449 and Attachment 1(g) for the convenience of the Examiner. The submission of the below publications does not represent an admission by the Applicants as to the status or usability of the below publications alone or in combination under 35 U.S.C. §§102 and 103 against the invention as claimed. A copy of each of the below references is provided.

<u>U.S. Patent</u>	<u>Inventor</u>
5,271,018	Chan
5,339,319	Yamane et al.
6,243,796	Otsuka
6,351,447	Takagi et al.
6,496,455	Takagi et al.
6,549,499	Takagi et al.
6,556,522	Ko et al.
6,560,177	Ko et al.

<u>U.S. Publications</u>	<u>Inventor</u>
2002/0067673	Ko et al.
2002/0089919	Ko et al.
2002/0075792	Ko et al.
2002/0145966	Hirotsune et al.
2002/0097665	Ko et al.
2002/0176341	Ko et al.
2003/0072236	Hirotsune et al.
2003/0095480	Ko et al.
2003/0123348	Ozaki

III. INDEPENDENT CLAIMS PRESENTED FOR EXAMINATION

By way of review and for the convenience of the Examiner in reviewing the instant Petition, the broadest independent claims are presented:

1. A method of recording information on and/or reproducing information from an optical storage medium including a lead-in area, a data zone in which user data is recorded, and a lead-out area, the method comprising:

recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium.

5. A method of recording information on and/or reproducing information from an optical storage medium including a lead-in area, a data zone in which user data is recorded, and a lead-out area, the method comprising:

recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area.

11. A method of recording data on and/or reproducing data from an optical storage medium including a lead-in area, a data zone, and a lead-out area, the method comprising:

recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium;

recording information on a position of a defect area appearing during reproduction of data in a memory built in a drive;

after completing the reproduction of the data, copying data recorded in the defect area into a predetermined area of the data zone using the position information of the defect area recorded in the memory if the write protection information indicates that the write protection status allows defect management; and

recording the position information of the defect area and information on the position of

the predetermined area of the data zone into which data recorded in the defect area has been copied if the write protection information indicates that the write protection status allows defect management.

IV. DETAILED DISCUSSION OF THE PUBLICATIONS AS COMPARED TO
BROADEST CLAIMS

1) Ko et al. (U.S. Patent No. 6,556,522)

This is just a general defect management method. If the user area will not be sufficient to record at predetermined volume, the controller would allocate additional spare area. Furthermore, this reference does not show any embodiment for write protection during writing or reading into/from the storage medium.

However, there is no disclosure or suggestion of “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 1, “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area” as recited in claim 9, or “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 11.

2) Ko et al. (U.S. Patent No. 6,560,177)

This is just a general defect management method. If the user area will not be sufficient to record at predetermined volume, the controller would allocate additional spare area. Furthermore, this reference does not show any embodiment to write protection during writing or reading into/from the storage medium.

However, there is no disclosure or suggestion of “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 1, “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area” as recited in claim

9, or “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 11.

3) Takagi et al. (U.S. Patent No. 6,351,447)

This is just a general defect management method wherein whether reproduction of recorded data is good is determined by sector unit and not by product code. There is no disclosure of any write protection in conjunction with the defect management.

However, there is no disclosure or suggestion of “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 1, “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area” as recited in claim 9, or “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 11.

4) Takagi et al. (U.S. Patent No. 6,496,455)

This is just a general defect management method wherein whether reproduction of recorded data is good is determined by sector unit and not by product code. There is no disclosure of any write protection in conjunction with the defect management.

However, there is no disclosure or suggestion of “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 1, “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area” as recited in claim

9, or “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 11.

5) Takagi et al. (U.S. Patent No. 6,549,499)

This is just a general defect management method wherein whether reproduction of recorded data is good is determined by sector unit and not by product code. There is no disclosure of any write protection in conjunction with the defect management.

However, there is no disclosure or suggestion of “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 1, “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area” as recited in claim 9, or “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 11.

6) Chan et al. (U.S. Patent No. 5,271,018)

This is just general defect management method. Each zone is divided into a number of logical partitions. Each partition also includes at least one local spare sectors at the end of the partition. Each zone, which may consist of one or more partitions, includes a number of overflow spare sectors at the end of the zone. If there is a defective sector in a partition, the local spare sector is used to replace the defective sector. If there are more defective sectors in a partition than there are local spare sectors, an overflow spare sector is used. There is no disclosure of any write protection in conjunction with the defect management.

However, there is no disclosure or suggestion of “recording write protection information

which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium" as recited in claim 1, "recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area" as recited in claim 9, or "recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium" as recited in claim 11.

7) Yamane et al. (U.S. Patent No. 5,339,319)

This is just general defect management method. A structure is described in which there are a plurality of information recording planes; a plurality of read/write heads employed at each of the information recording planes, wherein at least one of the plural information recording planes corresponds to such a recording plane where a substitution information track has been set.

However, there is no disclosure or suggestion of "recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium" as recited in claim 1, "recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area" as recited in claim 9, or "recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium" as recited in claim 11.

8) Otsuka et al. (U.S. Patent No. 6,243,796)

This reference has no relation with defect management. A recording medium ID information, which is condition information read from the recording medium loaded into a recording and reproducing apparatus, is compared with the ID information unique to the apparatus. When the correct ID is input, a recording or reproduction operation is allowed.

There is no disclosure of any write protection in conjunction with defect management.

However, there is no disclosure or suggestion of “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 1, “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area” as recited in claim 9, or “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 11.

9) Ozaki (U.S. Publication No. 2003/0123348)

This method provides a medium with security using defect information. When an operator does not set a key medium first, but sets the security medium which is provided with security, i.e., in which the PDL information is dummy, an address conversion is performed according to the dummy PDL upon the host ordering a reading or writing of data with a logical address, whereby a correct physical address cannot be obtained. Thus the security medium becomes unusable.

However, there is no disclosure or suggestion of “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 1, “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area” as recited in claim 9, or “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 11.

10) Hirotsune et al. (U.S. Publication No. 2003/0072236)

This reference has no relation with defect management. Some areas for special purposes are recognized as defective areas. Expanded functions such as record protection can be easily realized without requiring changes in hardware or physical specifications. The recording medium has a recording-limited area where recording is limited and which is recognized as a defective area, wherein an advertisement for an advertiser is displayed in response to a recording instruction, and wherein a recording of information in the recording-limited area is made possible by canceling the recording limit.

However, there is no disclosure or suggestion of “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 1, “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area” as recited in claim 9, or “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 11.

11) Hirotsune et al. (U.S. Publication No. 2003/0145966)

Some areas are unrecordable using a specific format. Information is arranged so as to allow restricted write and read operations in a commonly current write and read drive, i.e., the medium is subjected to specific formatting. Thus, it is possible to perform write and read operations with security. This reference does not mention and does not have any relation with defect management.

However, there is no disclosure or suggestion of “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 1, “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area” as recited in claim 9, or “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 11.

12) Ko et al. (U.S. Publication No. 2003/0095480)

This reference discloses a method of assigning a spare area. When the spare area for linear replacement becomes deficient, a supplementary spare area is allocated in sequence from the rearmost of a logical files area.

However, there is no disclosure or suggestion of “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 1, “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area” as recited in claim 9, or “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 11.

13) Ko et al. (U.S. Publication No. 2002/97665)

This reference discloses a method of assigning the spare area. When the spare area for linear replacement becomes deficient, a supplementary spare area is allocated in sequence from the rearmost of a logical files area. Therefore, only defect management is disclosed, but there is no disclosure relating to write protection.

However, there is no disclosure or suggestion of “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 1, “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area” as recited in claim 9, or “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 11.

14) Ko et al. (U.S. Publication No. 2002/0067673)

This reference discloses a write protection method for a disc in a bare state that is usually used in a cartridge having a recognition switch for write-protection, such as a DVD-RAM. Write protection information is recorded in a lead-in area, a lead-out area or a recording information area other than a user data area of the disc, and the data is write protected from unwanted overwriting or erasing using the write protection information. Even though the write protection information stored on the disc does not match the state of a recognition switch in a case of write-protection, the data can be prevented from unwanted overwriting or erasing. Accordingly, the write protection can be ensured when a recordable and/or rewritable recording medium is used in a bare state. See abstract.

However, there is no disclosure or suggestion of "recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium" as recited in claim 1, "recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area" as recited in claim 9, or "recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium" as recited in claim 11.

15) Ko et al. (U.S. Publication No. 2002/0075792)

This reference discloses a write protection method for a disc in a bare state that is usually used in a cartridge having a recognition switch for write-protection, such as a DVD-RAM. Write protection information is recorded in a lead-in area, a lead-out area or a recording information area other than a user data area of the disc, and the data is write protected from unwanted overwriting or erasing using the write protection information. Even though the write protection information stored on the disc does not match the state of a recognition switch in a case of write-protection, the data can be prevented from unwanted overwriting or erasing. Accordingly, the write protection can be ensured when a recordable and/or rewritable recording medium is used in a bare state. See abstract.

However, there is no disclosure or suggestion of “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 1, “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area” as recited in claim 9, or “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 11.

16) Ko et al. (U.S. Publication No. 2002/0176341)

This reference discloses a write protection method for a disc in a bare state that is usually used in a cartridge having a recognition switch for write-protection, such as a DVD-RAM. Write protection information is recorded in a lead-in area, a lead-out area or a recording information area other than a user data area of the disc, and the data is write protected from unwanted overwriting or erasing using the write protection information. Even though the write protection information stored on the disc does not match the state of a recognition switch in a case of write-protection, the data can be prevented from unwanted overwriting or erasing. Accordingly, the write protection can be ensured when a recordable and/or rewritable recording medium is used in a bare state. See abstract.

However, there is no disclosure or suggestion of “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 1, “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, each one of the plurality of write protection statuses indicating a size of a corresponding write protected area” as recited in claim 9, or “recording write protection information which indicates one of a plurality of write protection statuses of the optical storage medium, one of the statuses being to allow defect management of a write protected optical storage medium” as recited in claim 11.

17) DRX-510 UL, High Performance External Dual RW DVD/CD Recorder for Microsoft Windows Operating Systems (Sony Electronics Inc. 2003)

DRX-510 UL, High Performance External Dual RW DVD/CD Recorder for Microsoft

Windows Operating Systems (Sony Electronics Inc. 2003) discloses a DUAL RW DVD/CD recorder having a maximum 4X recording speed for DVD±RW, whereas a maximum recording speed for other DVD±RW recorders is 2.4 x. The DUAL RW DVD/CD recorder is able to write at both the 2.4 x and the 4 x recording speeds. However, it is unclear as to what mechanism is used by the DUAL RW DVD/CD recorder to determine the recording speed, or whether the DUAL RW DVD/CD recorder is compliant with versions 1.1 or 1.2 of the DVD±RW specification. Further, it is unclear to the extent to which this publication, which has a 2003 copyright date indicating a date of publication after the U.S. provisional filing date for the instant application, is usable as prior art such that claims 1 and 9 are patentable over the publication due at least to the publication not being usable as prior art under 35 U.S.C. §102.

- 18) DRU-510A High Performance Dual RW DVD/CD Recorder for Microsoft Windows 98SE, Windows Millennium Edition, Windows 2000, and Windows XP Operating Systems (Sony Electronics Inc. 2003)

DRU-510A High Performance Dual RW DVD/CD Recorder for Microsoft Windows 98SE, Windows Millennium Edition, Windows 2000, and Windows XP Operating Systems (Sony Electronics Inc. 2003) discloses a DUAL RW DVD/CD recorder having a maximum 4 x recording speed for DVD±RW, whereas a maximum recording speed for other DVD±RW recorders is 2.4 x. The DUAL RW DVD/CD recorder has able to write at both the 2.4 x and the 4 x recording speeds. However, it is unclear as to what mechanism is used by the DUAL RW DVD/CD recorder to determine the recording speed, or whether the DUAL RW DVD/CD recorder is compliant with versions 1.1 or 1.2 of the DVD±RW specification. Further, it is unclear to the extent to which this publication, which has a 2003 copyright date indicating a date of publication after the U.S. provisional filing date for the instant application, is usable as prior art such that claims 1 and 9 are patentable over the publication due at least to the publication not being usable as prior art under 35 U.S.C. §102.